

## **DOUBLE PATENTING**

Applicant thanks the Examiner for indicating that the double patenting rejections will be held in abeyance until allowable subject matter has been found.

## **REJECTION UNDER 35 U.S.C. §112**

Applicant thanks the Examiner for withdrawing the rejection of claims 22-29 under 35 U.S.C. §112, second paragraph, for improper Markush language.

Claims 22, 26, 28, and 29 have been rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite for (i) reciting "obtained from." Solely in an effort to expedite prosecution and in no way acquiescing in the rejection, Applicant has amended the claims as suggested by the Examiner to recite alternative Markush language.

Also, in response to the Examiner's comments in the Advisory Action, the phrase "derivative thereof" is an art recognized term, as evidenced by its frequent use in chemical patents. The phrase is directed to a compound obtained from another and containing essential elements of the parent substance. The use of this term does not render the claims indefinite, nor does it alter the scope of the claims. In particular, the original claim language recited "obtained from" so in order to recite "chosen from" and still maintain the scope of the claims, it is necessary to recite the term "derivatives thereof."

Reconsideration and withdrawal of the rejection are respectfully requested.

## **REJECTION UNDER 35 U.S.C. §102(e)**

The Examiner has maintained the rejection of claims 16-19, 21-23, 25-29, 35, and 37 under 35 U.S.C. §102(e) over Dupuis et al. (U.S. Patent No. 6,080,392). Applicant respectfully traverses the rejection for the reasons already of record as well as those presented below.

The Examiner states that "[w]hile formula (IV) of Dupuis teaches R and R' as identical or different C8-C18 hydrocarbon radicals, Dupuis also teaches this range as a preferable embodiment (Col. 2, lines 36-37) and teaches X (Col. 11, line 28), which corresponds to R and R', as a hydrophobic radical, which encompasses the teachings of the instant invention." (Office Action at 3.) Formula (I) of Dupuis is a generic formula for polyurethanes used in Dupuis' invention. However, a genus does not always anticipate a species within that genus, as in the present case. When the compound is not specifically named, but instead it is necessary to select portions of teachings with a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. *Ex Parte A*, 17 U.S.P.Q.2D 1716 (B.P.A.I. 1990) and MPEP §2131.02, Feb. 1, 2000, 7<sup>th</sup> Edition.

The effect of the disclosure of a genus on the patentability of a species depends on the size of the genus and the disclosure of the preferred sub-genera and/or species, if any. With a genus of sufficiently limited and defined substituents, one may find anticipation. *See In re Petering*, 301 F.2d 676, 682, 133 U.S.P.Q. 275, 280 (C.C.P.A.) 1962) (genus of 20 compounds describes each species within the meaning of section 102(b)). In other words, a genus will anticipate a species within that genus but not

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expressly disclosed if one of ordinary skill "would immediately envisage" the claimed compound from the disclosed genus. *Id.* at 682. If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. See MPEP §2131.02, Feb. 1, 2000, 7<sup>th</sup> Edition. One of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be "at once envisaged." *Id.* Applicant respectfully submits that the genus disclosed in Dupuis is not sufficiently limited and that one of ordinary skill in the art would not be able to draw the structural formula or write the name of each of the compounds included in the generic formula of Dupuis.

Applicant respectfully submits that the present situation is analogous to that in *In re Meyer*. In *In re Meyer*, the prior art reference, Reissert, disclosed "oxidation by alkaline chlorine or bromine solution." *In re Meyer*, 599 F.2d 1026, 1031 (C.C.P.A. 1979). The court held that the disclosure of the genus did not identically disclose or describe, within the meaning of §102, the species alkali metal hypochloride, since the genus would include an untold number of species. *Id.*

In the present situation, Dupuis teaches a generic formula (I) wherein a substituent X is defined as a hydrophobic radical. See col. 2, lines 61-63 and col. 3, lines 43-44. The term "hydrophobic radical" is so broad that an untold number of species would be encompassed by such language. Such a disclosure is so broad that one of ordinary skill in the art would not be able to immediately envisage the claimed compounds from the disclosed genus. In particular, one of ordinary skill in the art would not be able to immediately envisage at least one nonionic amphiphilic associative

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polyurethane corresponding to formula (I) in which one of the radicals  $R_1$  and  $R_2$  is an alkyl group having 8 to 18 carbons and the other group is an alkyl having 1 to 6 carbons, as presently claimed.

As discussed above, the size of the genus encompassed by formula (I) of Dupuis is huge and thus precludes a finding of anticipation for at least this reason. Moreover, the disclosed preferred sub-genera and/or species also precludes a finding of anticipation. Dupuis teaches that formula (IV) is a preferred polymer of formula (I). See col. 4, lines 56-64. At most, Dupuis teaches that  $R_1$  and  $R_2$  may both be  $C_8$  hydrocarbon radicals or that one of  $R_1$  and  $R_2$  may be a  $C_8$  hydrocarbon radical while the other is a  $C_9$ - $C_{18}$  hydrocarbon radical. However, even this disclosed preferred sub-genera and/or species of Dupuis does not anticipate the claimed invention. Dupuis does not teach at least one nonionic amphiphilic associative polyurethane corresponding to formula (I) in which one of the radicals  $R_1$  and  $R_2$  is an alkyl group having 8 to 18 carbons and the other group is an alkyl having 1 to 6 carbons, as presently claimed.

For at least this reason, Dupuis does not anticipate the claimed invention. Reconsideration and withdrawal of the rejection are respectfully requested.

#### **REJECTION UNDER 35 U.S.C. §103(a)**

The Examiner has also maintained the rejection of claims 20, 24, 30-34, and 36 under 35 U.S.C. §103(a) over Dupuis in view of Cauwet (U.S. Patent No. 5,478,562) and Prencipe (U.S. Patent No. 5,385,729) in further view of Carey. Applicant traverses the rejection for the reasons already of record as well as those presented below.

The Examiner previously argued that "[a]n alkyl group comprising 6 carbons is homologous to one comprising 8 carbons." (Office Action dated May 2, 2001, at 1.) The Examiner continues to rely on *In re Henze*, 181 F.2d 196, 85 U.S.P.Q. 261 (C.C.P.A. 1950) for the proposition that "a presumption of unpatentability arises against a claim directed to a composition of matter, the **adjacent** homologue of which is old in the art." (Emphasis added.) The Examiner relies on the statements of the C.C.P.A. in *Henze* for the proposition that once the presumption has been raised that the burden then shifts to applicant to rebut the presumption by a showing of unexpected beneficial properties. (Final Office Action at 4.)

The present invention is distinguishable from the invention at issue in *In re Henze*. Henze claimed specific compounds, not a composition, as in the present case. For at least this reason, the holding that a presumption of unpatentability arises against a claim directed to a composition of matter is not applicable to the instant facts. See *In re Mills, infra* (wherein the court held that the presumption of unpatentability was limited to claims directed to a composition of matter (a new compound).) Since the present application is directed to a composition comprising two components, not a single compound, no presumption of unpatentability arises. Accordingly, there is no need for applicant to provide evidence to rebut the presumption.

Second, homology should not automatically lead to a conclusion of *prima facie* obviousness. See *In re Elperm*, 326 F.2d 762, 767, 140 U.S.P.Q. 224, 228 (C.C.P.A. 1964) (stating that the greater the difference in the carbon chain, the better the chance to argue against the presumption of obviousness).

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The present application is similar to the facts in *In re Mills*, 281 F.2d 218, 219 (C.C.P.A. 1960). Mills claimed a composition comprising an organic detergent agent. In making its decision, the court in Mills stated that “[w]here, as here, the invention for which a patent is sought relates to one member of an homologous series and the disclosure of the prior art is of a non-adjacent member of the series, *In re Henze* [citation omitted] is not authority for a ‘legal presumption’ of obviousness of the claimed invention.” *Id.* at 221. In *In re Mills* the Examiner used this “legal presumption,” rather than facts, to bridge the gap between a C(1) and C(8) to C(12) alkyl sulphates. The C.C.P.A. stated that “the ‘presumption of unpatentability’ referred to in the Henze case, was limited to a claim directed to a composition of matter (a new compound), the adjacent homologue of which was old in the art.” *Id.* at 223. The court noted that there was no evidence in the record from which it could be determined that “the mere existence of a homologous relationship between compounds as widely separated as 1 and 8 to 12 will support a ‘reasonable’ ‘presumption of unpatentability.’” *Id.* The court further stated that “[I]f the Patent Office wishes to rest a rejection on chemical theory, it is its duty to support its case with adequate evidence of the existence and meaning of that theory.” *Id.*

As in *In re Mills*, the present invention is directed to a composition comprising two components. Moreover, the art cited by the Examiner contains a disclosure of a non-adjacent member of a homologous series. In contrast, an alkyl group comprising 1 to 6 carbons as presently claimed is not an **adjacent** homolog to an alkyl group comprising 8 carbons. As discussed above, the presently claimed invention is directed to a composition containing a compound having as one substituent an alkyl group having

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from 1 to 6 carbons and as another substituent an alkyl group having from 8 to 18 carbons. This is in stark contrast to the species disclosed in the primary reference which only teaches that both the corresponding substituents are alkyl groups having from 8 to 18 carbons. There is no suggestion in the primary reference that one of the substituents have an entirely different range of carbons present in its alkyl group. For the same reasons as held by the court in *In re Mills*, *In re Henze*, which is relied upon by the Examiner, is not proper here as authority for the legal presumption of obviousness of the claimed invention.

Finally, as in *In re Mills*, the present Examiner has relied on this legal presumption rather than facts to support her position that a compound having two substitutents chosen from alkyl groups ranging from 8 to 18 carbons renders obvious a compound having two substituents, one of which is an alkyl group having from 1 to 6 carbons, the other of which is an alkyl group having from 8 to 18 carbons. In addition, the Examiner has not supported its case with evidence that a **composition** comprising two components would be presumptively unpatentable in view of a **non-adjacent homolog compound**. Absent such evidence, the Examiner has failed to establish a *prima facie* case of obviousness based on a homologous relationship. For at least this reason, Dupuis does not teach or suggest the claimed at least one nonionic amphiphilic associative polyurethane corresponding to formula (I), as presently claimed.

One of the criteria to establish a *prima facie* case of obviousness is that all of the references must teach or suggest all of the claim limitations. As discussed above, Dupuis does not teach or suggest the claimed at least one nonionic amphiphilic associative polyurethane corresponding to formula (I), as presently claimed. Applicant

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respectfully submits, and the Examiner acknowledges, that the secondary references do not overcome the deficiencies of Dupuis et al. (Office Action at 5.)

Cauwet teach a cosmetic composition comprising at least one nonionic surface-active agent of the alkyl polyglycoside and/or polyglycerolated type and at least one polyetherurethane. See col. 1, lines 63-67. However, Cauwet et al. does not teach or suggest a cosmetic composition comprising at least one nonionic amphiphilic associative polyurethane corresponding to a formula wherein the R and R' are different and defined such that one is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons.

Prencipe teaches a personal care composition containing a cross-linked polymer derived from a polymer containing repeating units in which one or more phosphonic acid groups are bonded to one or more carbon atoms in the polymer chain. See col. 5, lines 65-68. However, Prencipe et al. does not teach or suggest a cosmetic composition comprising at least one nonionic amphiphilic associative polyurethane corresponding to a formula wherein the R and R' are different and defined such that one is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons.

Carey teaches that condensation reactions are inherently known to give a product accompanied by the expulsion of a stable molecule when two molecules are combined. However, like the other secondary references, Carey fails to teach or suggest a cosmetic composition comprising at least one nonionic amphiphilic associative polyurethane corresponding to a formula wherein the R and R' are different and defined such that one is an alkyl group having 8 to 18 carbons and the other group is an alkyl group having 1 to 6 carbons.



The combination of references does not teach or suggest all of the claim elements, and thus the first criteria for a *prima facie* case of obviousness has not been met. Moreover, there is no "clear and particular" suggestion or motivation as required by *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999), in the references to modify Dupuis et al. so that one of the C<sub>8</sub>-C<sub>18</sub> hydrocarbon radicals is changed to a C<sub>1</sub>-C<sub>6</sub> alkyl group. Absent Applicant's disclosure, there is no reasonable expectation of success that such a modification would result in a polyurethane that is compatible with (B) at least one anionic polymer comprising at least one fatty-chain monomer unit in a cosmetic composition. Reconsideration and withdrawal of the rejection are respectfully requested.

### **CONCLUSION**

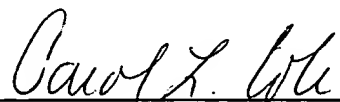
In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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